A recent example is some work with the clinical modification of the Reid-Hunt acetonitrile test, which was said to indicate the presence of an increased amount of thyroid, or of thyreotropic hormone from the anterior pituitary, in the blood stream. The test was accomplished by noting the effect of injections of the blood serum to be tested upon the resistance of white mice to acetonitrile. Recent work[8] applying the methods of bio-assay, as advocated by Trevan and Burn, to this test has shown it to be without any clinical value.

Another important fact requiring consideration is the number of preparations that are now on the market with potency expressed in various animal units. It is obvious that unless the proper methods of bio-assay are used, the potency of the marketed preparation will vary as much as the resistance of the animals used, and it would be of interest, therefore, to have more details concerning methods of biological assay from pharmaceutical houses offering assayed substances for sale.

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THE PHYSICIAN: SCIENTIST OR ARTIST?

Ignoring for the moment many secondary meanings, science may be defined as the classification and coördination of factual knowledge; art as the utilization or application of knowledge to accomplish desired results. In the former case, knowledge is static; in the latter it is dynamic.

If the foregoing definitions are correct, it is evident that the present-day tendency to regard medicine as strictly a science is ill advised. For reasons of policy, perhaps such a conception is well enough. But any scheme of classification that fails to consider the claims of art in the premises does violence to a fair appraisal of the question.

Most basic knowledge concerning the structure and functions of the human body obviously is derived from science. Equally obviously the practical application of that knowledge falls within the province of art.

All living things are manifestations of art in the sense that their interpretation may be approached only through the artistic faculties. It is not possible to apply to them the cold, formal, unchanging rules and methods of science. Science confines itself to the material, and refuses to concede that the difference between animate and inanimate matter is in any important respect significant. Conclusions adduced from the study of matter, even its minutest subdivisions, refer exclusively to physical states existing at certain definite moments of time, not to the constantly changing conditions which constitute the very essence of living processes. Science seeks only data that are fixed and stable relative to the material elements which form life's medium of expression.

To be sure, matter is the essential basis of life as mortals know it. But there is a profound and fundamental distinction between living and nonliving matter, which in the very nature of things science does not undertake to investigate and explain. Science relies on measurement, mathematical exactness. These depend upon sense perception. It follows that science cannot deal with the intangible factors involved in determining the normality or abnormality of the actions and reactions of living organisms, ordinarily called symptoms. Symptoms point the way, the only way, to diagnosis. And diagnosis is the heart of medical practice.

The complex problems relating to the interpretation of life and its functional activities lie wholly within the sphere of the artistic. This higher plane is the *fons et origo* of those familiar, but scientifically undemonstrable mental processes, analysis, abstract reasoning, logical deduction; and here alone the power to differentiate the abnormal from the normal, to select the one true from many possible conclusions, may operate. Imagination, intuition, inference, judgment—these are faculties belonging to the realm of art as truly as those employed in the appreciation of beauty or the enjoyment of great music.

A master painting is composed of material substance—canvas, pigments, oil. The revelations it makes to the cultured beholder are something other and more. The subtle qualities of perspective, harmony, charm, are in no sense identical with the physical components, however intimately dependent on them.

Until the mystery of life and the riddle of its meaning are solved, the vital phenomena of health and disease cannot be relegated to the domain of science where the yardstick reigns and demonstration by the physical senses is the court of last appeal. Even biology, the so-called "science of life," tacitly recognizes the dilemma and evades it by boldly assuming the fact of life, without claiming to comprehend, much less to explain it.

Medicine is both an art and a science. Any comparison as to relative importance would be invidious. Whether consciously or unconsciously, the physician in the pursuit of his daily duties must needs be an exponent of art no less than of science. Realization of this truth should be an inspiration as well as a constant incentive.

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The Automatic Control of Radium.—At the Westminster Hospital, where special attention has been given to radium therapy for some time, an important advance in technique has been made. The new installation incorporates a system of distant control for the better protection of operators and has allowed larger "bombs" to be used. Additional radium has been acquired to give effect to the conclusion earlier reached by the surgeons in charge of the radiotherapy department that deeper penetration can be obtained by removing the radium to a greater distance from the point of application. Four grams of radium, valued at about $200,000, is used and is carried alternately by two bombs. By a system of automatic electrical control the radium in its container can be lifted from a leaden safe into one of the bombs and swung into position over the patient. The electrical switchboard is situated fourteen feet from the patient's couch. The two bombs and the radium container are made of a heavy ray-proof metallic compound recently invented. The installation, which has involved months of experimental construction and special tools, has cost about $4,000 apart from the radium.

8 Escamilla, R. F.: Failure of the Reid-Hunt Acetonitrile Reaction as a Clinical Test for Hyperthyroidism, Endocrinology. In press.